

Developing a Valuation Based Portfolio of Dow Jones Stocks: 2009 - 2012



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Background: In this study, we create a portfolio of Dow Jones stocks based on valuation rather than price of market cap weight. Our hypothesis is that giving higher portfolio weights to these stocks that are most undervalued will increase portfolio returns. Using a fair value index based on Morningstar fair value prices for each Dow Jones stock, we create a portfolio weighting model. Using the period of 2009-2011 for analysis, we compare the returns of the Dow Jones fair value portfolio to the Dow Jones weighted portfolio. We also divide this period into three sub periods; the rebound period (2009), the growth period (2010), and the trading range period (2011) and compare the performance of our Dow Jones fair value portfolio to the Dow Jones price weighted portfolio.

Purpose:

The purpose of this study is determine whether or not using a fair value approach to construct a portfolio will outperform the Dow Jones Index during the period of 2009-2012.

Model Specification:

$$\begin{aligned} FVI_{it} &= FV_{it}/P_{it} \\ W_{it} &= FVI_{it}/\sum FVI_{it} \\ DV_{it} &= W_{it} * \$1,000,000 \\ Shares_{it} &= DV_{it}/P_{it} \\ PV_{t+1} &= Shares_{it} * P_{it+1} \\ Return &= PV_{t+1}/PV_t \end{aligned}$$

Data Analysis:

- Rebound Period (2009) – FVI Portfolio outperformed market by 18.84%.
- Upswing Period (2010) – FVI Portfolio outperformed market by 12.91%.
- Trading Range Period (2011) – Underperformed market by 11.0%
- Trading Range Period (2012) – To date FVI Portfolio outperformed market by 8.86%
- Overall Period (2009-2012) – FVI Portfolio outperformed market by 29.61%

Date	FVI Return	Dow Return	Difference
Mar-09	-17.03%	-19.56%	2.53%
Jun-09	21.34%	11.77%	9.57%
Sep-09	18.64%	12.37%	6.27%
Dec-09	6.98%	6.51%	0.47%
Mar-10	5.30%	-1.00%	6.30%
Jun-10	-11.93%	-6.66%	-5.27%
Sep-10	9.67%	2.48%	7.19%
Dec-10	6.71%	2.02%	4.69%
Mar-11	4.07%	5.61%	-1.54%
Jun-11	-0.37%	2.02%	-2.39%
Sep-11	-14.42%	-6.45%	-7.97%
Dec-11	11.29%	10.39%	0.90%
Mar-12	11.86%	5.98%	5.88%
Jun-12	-3.23%	-6.21%	2.98%
Total Returns	48.88%	19.27%	29.61%

Conclusion:

- Fair Value Model outperformed market for the overall period.
- Fair Value Model outperformed market in the rebound period 2009 and 2010.
- Fair Value Model underperformed market in the trading range period 2011, but outperformed in 2012.
- Morningstar's fair value index shows promise as a predictor of stock performance.